

CLAIMS

1. A folding-type electronic device that has a main casing and a sub-casing openably and closably coupled with each other via a hinge, wherein

5 the hinge is mounted with a functional component, and the electronic device enables a user to access the functional component and operate the functional component regardless of whether the electronic device is in the opened state or in the closed state.

10 2. A folding-type electronic device according to claim 1, wherein the functional component is mounted on the hinge coaxially with the hinge.

15 3. A folding-type electronic device according to claim 2, wherein the hinge has a pair of bearing mechanisms that comprise:

a pair of bearings coaxially provided, with a distance between the two bearing mechanisms, on one of a main casing and a sub-casing; and

20 a pair of shaft members coaxially provided, with a distance between the two shaft members, on the other of the main casing and the sub-casing, and engaged with the bearings respectively, and

the functional component is mounted in the space between the pair of bearing mechanisms.

25 4. A folding-type electronic device according to claim 3, wherein

30 the pair of bearings are formed on a chassis of one of the main casing and the sub-casing, and the pair of shaft members comprises a pair of hinge pins, which are fixed to cylinders formed on a chassis of the other of the main casing and the sub-casing,

each hinge pin has a large-diameter portion and a small-diameter portion integrally structured in an axial direction, and

35 the large-diameter portions are fixed to the cylinders respectively, and the small-diameter portions are engaged with a pair of second bearings

respectively.

5. A folding-type electronic device according to
claim 3, wherein

the functional component is disposed
5 between the pair of bearing mechanisms and is rotatably
supported by a pair of second bearings that are provided,
with a distance therebetween, on one of the main casing
and the sub-casing.

10 6. A folding-type electronic device according to
claim 3, wherein

the functional component is disposed
between the pair of bearing mechanisms and is movably
supported in an axial direction by a pair of second
bearings that are provided, with a distance therebetween,
15 on one of the main casing and the sub-casing.

7. A folding-type electronic device according to
claim 6, wherein

the functional component is a structure
unit that has a large-diameter portion at the center of
20 the structure unit in an axial direction, and has small-
diameter portions at both ends of the structure unit, and

the small-diameter portions at both ends
are engaged with the pair of second bearings
respectively.

25 8. The folding-type electronic device according to
claim 4, wherein

the functional component is a rotation
switch that is rotatably supported within at least a
constant angular range by the pair of second bearing
30 members.

9. A folding-type electronic device according to
claim 8, wherein

the functional component consists of: a
rotation unit that is rotatably supported within at least
35 a constant angular range by the pair of second bearings;
and a rotation detection sensor that is fixed to one of
the main casing and the sub-casing, adjacent to the

rotation unit.

10. A folding-type electronic device according to
claim 4, wherein the functional component is supported by
the pair of second bearings such that the functional
5 component is not rotatable but is movable in an axial
direction within a predetermined range.

11. A folding-type electronic device according to
claim 4, wherein

10 the functional component is supported by
the pair of second bearings such that the functional
component is rotatable within at least a constant angular
range and is also movable in an axial direction within a
predetermined range.

12. A folding-type electronic device according to
15 claim 1, wherein the functional component is an electric
element such as a switch.

13. A folding-type electronic device according to
claim 1, wherein the functional component is a
communication element.

20 14. A folding-type electronic device according to
any one of claim 1, wherein the functional component is
an optical element.

15. A folding-type electronic device according to
claim 1, wherein the functional component is an acoustic
25 element.